

Serial No. 09/929,323

AMENDMENTS TO THE CLAIMS:

- 1) (Currently Amended) A computer implemented method for provisioning broadband service in a Point-to-Point Protocol over Ethernet (PPPoE) network, comprising:
 - providing a list of a plurality of internal domain names for an Internet Service Provider (ISP) to a modem;
 - generating an authentication request including a user identifier;
 - setting a destination address of the authentication request to all of the internal domain names on the list;
 - transmitting ~~an~~ the authentication request ~~including a user identifier~~ from the modem to the destination address ~~listed internal domain names~~ over a PPPoE network ;
 - and
 - receiving authorization for the modem from ~~each of the at least one but not all of~~ at least one said said internal domain names of the ISP associated with said user identifier, at least one said authorization including a static IP address reserved for the user so that for any subsequent PPPoE sessions established the user is always supplied with the same static IP address to establish connectivity to the Internet.
- 2) (Previously Presented) The method of claim 1, wherein each of said domain names is associated with a different Broadband Service Node (BSN) that receives the authentication request.
- 3) (Original) The method of claim 1, further comprising, prior to said transmitting step, the step of establishing a PPPoE session.
- 4) (Previously Presented) The method of claim 1, further comprising, prior to said transmitting step, the steps of:
 - requesting only a single user identifier from a user of a client computer;
 - receiving said user identifier; and
 - storing said user identifier in the modem.

Serial No. 09/929,323

5) (Previously Presented) The method of claim 4, wherein said transmitting step comprises transmitting an authorization request containing said user identifier and a generic password to each of said multiple domain names.

6) (Cancelled)

7) (Currently Amended) The method of claim ~~6~~1, further comprising:
transmitting a configuration request to the ISP, where said configuration request is addressed from said static IP address;
receiving full configuration details from said ISP, where said full configuration details are addressed to said static IP address; and
automatically configuring said modem based on said full configuration details.

Serial No. 09/929,323

8) (Currently Amended) A system for provisioning broadband service in a Point-to-Point Protocol Over Ethernet (PPPoE) network, comprising:

at least one client computer;

a modem coupled to said client computer, said modem including a memory comprising:

a list of a plurality of internal domain names for an Internet Service Provider (ISP);

instructions for generating an authentication request including a user identifier;

instructions for setting a destination address of the authentication request to all of the internal domain names on the list;

instructions for transmitting an the authentication request including a user identifier from said modem to the destination address-listed internal domain names over a PPPoE network; and

instructions for receiving authorization for the modem from each of the at least one of said internal domain names of the ISP associated with said user identifier;

multiple Broadband Service Nodes (BSNs) coupled to said modem, where each of said listed internal domain names is associated with a different one of said multiple BSNs so that each listed BSN receives the authentication request; and

an authentication server coupled to each one of said multiple BSNs, said authentication server transmitting authorization for the modem for the internal domain names that are associated with the user identifier, at least one said authorization including a static IP address reserved for the user so that for any subsequent PPPoE sessions established the user is always supplied with the same static IP address to establish connectivity to the Internet.

Serial No. 09/929,323

- 9) (Original) The system of claim 8, further comprising:
- a Digital Subscriber Line Access Multiplexor (DSLAM) coupled between said modem and said BSNs;
 - an Asynchronous Transfer Mode (ATM) network coupled between said DSLAM and said BSNs; and
 - a Broadband Remote Access Server (BRAS) coupled between said ATM network and said BSNs.
- 10) (Original) The system of claim 8, wherein said BSNs are coupled to the Internet.
- 11) (Cancelled)
- 12) (Currently Amended) A modem for use in conjunction with a computer system for provisioning broadband service in a Point-to-Point Protocol Over Ethernet (PPPoE) network, the modem comprising:
- A list of a plurality of internal domain names of an Internet Service Provider:
 - instructions for generating an authentication request including a user identifier;
 - instructions for setting a destination address of the authentication request to all of the internal domain names on the list;
 - instructions for transmitting ~~an the~~ authentication request ~~including a user identifier~~ from said modem to the destination address ~~listed internal domain names~~ over a PPPoE network; and
 - instructions for receiving authorization for the modem from each of the at least one of said internal domain names of the ISP associated with said user identifier, at least one said authorization including a static IP address reserved for the user so that for any subsequent PPPoE sessions established the user is always supplied with the same static IP address to establish connectivity to the Internet.

Serial No. 09/929,323

- 13) (Previously Presented) The modem of claim 12, further comprising:
instructions for causing a client computer to request the user identifier; and
instructions for receiving the user identifier from the client computer and storing
the user identifier in the modem.
- 14) (Previously Presented) The modem of claim 12, wherein the list was hardcoded into the
modem at the time of manufacture
- 15) (Previously Presented) The modem of claim 12, wherein said receiving step comprises
acquiring at least one static Internet Protocol (IP) address to establish connectivity to the
Internet.
- 16) (Cancelled)
- 17) (Previously Presented) A modem for use in conjunction with a computer system for
provisioning broadband service in a Point-to-Point Protocol Over Ethernet (PPPoE) network,
the modem comprising:
instructions for causing a client computer to request a user identifier;
instructions for receiving the user identifier from the client computer and storing
the user identifier in the modem;
a list of a plurality of possible internal domain names to query for authorization
for an Internet Service Provider (ISP).
instructions for transmitting an authentication request including a user identifier
from said modem to the internal domain names on the list over a PPPoE network ; and
instructions for receiving authorization for the modem from at least one of said
domain names of the ISP associated with said user identifier and acquiring at least one
static Internet Protocol (IP) address to establish connectivity to the Internet.

Serial No. 09/929,323

18) (Previously Presented) A system for provisioning broadband service in a Point-to-Point Protocol Over Ethernet (PPPoE) network, comprising:

- multiple Broadband Service Nodes (BSNs) of an internet service provider (ISP), each said BSN associated with a different internal domain name;

- an authentication server coupled to each one of said multiple BSNs, said authentication server including a table that lists user identifiers against static IP addresses;

- at least one client computer; and

- a modem coupled to said client computer, said modem including a memory comprising:

- instructions for requesting a user identifier from the client computer;

- instructions for receiving the user identifier from the client computer and storing the user identifier in said modem;

- a list of a plurality of possible BSN internal domain names to query for authorization for an ISP;

- instructions for transmitting an authentication request including the user identifier from said modem to the BSNs associated with the listed internal domain names of the ISP over a PPPoE network ; and

- instructions for receiving authorization for the modem and a static IP address from at least one of said internal domain names of the ISP associated with said user identifier;

- said possible BSNs querying their authentication server to determine whether the user identifier in the authentication request is listed in the table, if listed authorization including the static IP address from at least one of said internal domain names being transmitted back to the modem to establish connectivity to the Internet.

19) (Cancelled)

20) (Previously Presented) The method of claim 1, wherein the modem is hardcoded with the list of internal domain names at the time of manufacture.